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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/672,682 | 09/28/2000 | John Hong | 071815.0490 | 8101 |

7590 04/01/2002

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EXAMINER

ADDISON, KAREN B

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 04/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|--------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/672,682 | HONG, JOHN |
| | Examiner | Art Unit |
| | Karen B Addison | 2834 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9,11-15,17-23,25-32,42-44,52-69 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 - 5) Claim(s) ____ is/are allowed.
 - 6) Claim(s) 1-9,11-15,17-23,25-32,42-44 and 52-69 is/are rejected.
 - 7) Claim(s) ____ is/are objected to.
 - 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) Interview Summary (PTO-413) Paper No(s). ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: ____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 62 are rejected under 35 U.S.C. 102(b) as being anticipated by

Grudkowski (5243307).

Dieulesaint discloses in fig. (4) an apparatus for varying the characteristics of an acoustic wave comprising: a medium for acoustic wave propagation (1), a transducer (2) formed on the medium and a first and second light source (8) illuminating the medium.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9,11-15,17-23, 25-32, 42-44, 52-69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grudkowski (5423307). Interview of Dieulesaint (3706055).

Grudkowski disclose an apparatus for varying the characteristics of an acoustic wave comprising: a piezoelectric medium (100), a transducer (105) generating an acoustic wave, light emitting diode varied (163), and a controller (168) for varying the intensity of the light source.

Grudkowski does not disclose a first and second light source and a select frequency component of the acoustic wave is read from the transducer. *TW*

Dielulesaint teaches in fig.4 the concept of having a acoustic wave device comprising , a medium for acoustic wave propagation (1), a tranducer formed on the medium and a first and second light source(8) for the purpose of purpose of illuminating the transducer. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the acoustic wave device of Grudkowski with the concept of Dieluesaint for the purpose of varying the illumination of the transducer.

Reading a selected frequency component of the acoustic wave is intended use. It has
been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647(1987).

Prior art doesn't disclose a laser diode. The Examiner takes official notice of the equivalence of the light emitting diode and the laser diode for their use in the surface acoustic wave art and the selection of any of these known equivalents to illuminate the medium. To substitute a laser diode for the disclosed light emitting diode would have been and obvious functional equivalent. The examiner also takes official notice of the

equivalence of the controller and the light modulator for their use in the surface acoustic wave art and the selection of any of these known equivalents to vary the light intensity. The method of operation and the method of manufacturing is inherent base on the structural limitation of Grudkowski.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen B Addison whose telephone number is 703-306-5855. The examiner can normally be reached on 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1317. The fax phone numbers

Application/Control Number: 09/672,682
Art Unit: 2834

Page 5

for the organization where this application or proceeding is assigned are 703-305-3431
for regular communications and 703-305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is 703-308-
0956.

KBA
March 26, 2002

Thomas M. Dougherty

THOMAS M. DOUGHERTY
PRIMARY EXAMINER
GROUP 2100

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Initials are in